CLAIMS

1. A solar cell module comprising a plurality of solar cells in a flat plate shape, and an inner lead for electrically connecting a bus bar electrode provided on a light receiving surface of one of the solar cells and a bus bar electrode provided on a non-light receiving surface of the other solar cell adjacent thereto, wherein

the solar cells which are connected to each other by the inner lead are sealed into a filler, and

an edge along the longitudinal direction of the bus bar electrode and a portion from the edge to a predetermined distance inward therefrom are brought into direct contact with the filler.

2. The solar cell module according to claim 1, wherein the bus bar electrode is joined to the inner lead with a solder at its center portion in the transverse direction.

3. The solar cell module according to claim 1 or 2, wherein the width of the inner lead is smaller than the width of the bus bar electrode.

4. The solar cell module according to any one of claims 1 to 3, wherein the solar cell has a plurality of finger electrodes at least one ends

of which are connected to the bus bar electrode formed on its light receiving surface and/or non-light receiving surface.

5. The solar cell module according to claim 4, wherein the finger electrode is brought into direct contact with the filler over its whole length.

6. The solar cell module according to claim 4, wherein the one end, connected to the bus bar electrode, of the finger electrode is coated with a coating member.

7. The solar cell module according to claim 6, wherein the coating member in the finger electrode is a solder resist.

8. The solar cell module according to any one of claims 1 to 7, wherein a solder for joining the bus bar electrode and the inner lead contains Bi.

9. The solar cell module according to any one of claims 1 to 8, wherein a solder for joining the bus bar electrode and the inner lead contains Sn, and satisfies the following equation:

$$\Sigma(ViWi) < 2.8(\%)$$

(where i denotes the number of elements composing the solder, Vi denotes the contraction

coefficient (%) at the time of solidification of each of the elements composing the solder, Wi denotes the percentage by weight of each of the elements composing the solder (the whole is taken as 1), and the sum Σ takes 1 to i)

10. A solar cell module comprising a plurality of solar cells in a flat plate shape, and an inner lead for electrically connecting a bus bar electrode provided on a light receiving surface of one of the solar cells and a bus bar electrode provided on a non-light receiving surface of the other solar cell adjacent thereto, wherein

the solar cells which are connected to each other by the inner lead are sealed into a filler,

an edge along the longitudinal direction of the bus bar electrode and a portion from the edge to a predetermined distance inward therefrom are coated with a coating member, and

the coating member is brought into direct contact with the filler.

11. The solar cell module according to claim 10, wherein the coating member in the bus bar electrode is a solder resist.

12. The solar cell module according to claim

10 or 11, wherein the bus bar electrode is joined to the inner lead with a solder at its center portion in the transverse direction.

13. The solar cell module according to any one of claims 10 to 12, wherein the solar cell has a plurality of finger electrodes at least one ends of which are connected to the bus bar electrode formed on its light receiving surface and/or non-light receiving surface.

14. The solar cell module according to claim 13, wherein the one end, connected to the bus bar electrode, of the finger electrode is coated with the coating member.

15. The solar cell module according to claim 14, wherein the coating member in the finger electrode also serves as a coating member in the bus bar electrode.

16. The solar cell module according to claim 14 or 15, wherein the coating member in the finger electrode is a solder resist.

17. The solar cell module according to any one of claims 10 to 16, wherein a solder for joining the bus bar electrode and the inner lead contains Bi.

18. The solar cell module according to any

one of claims 10 to 17, wherein a solder for joining the bus bar electrode and the inner lead contains Sn, and satisfies the following equation:.

$$\Sigma(ViWi)<2.8(\%)$$

(where i denotes the number of elements composing the solder, Vi denotes the contraction coefficient (%) at the time of solidification of each of the elements composing the solder, Wi denotes the percentage by weight of each of the elements composing the solder (the whole is taken as 1), and the sum Σ takes 1 to i)

19. A solar cell module comprising a plurality of solar cells in a flat plate shape, and an inner lead for electrically connecting a bus bar electrode provided on a light receiving surface of one of the solar cells and a bus bar electrode provided on a non-light receiving surface of the other solar cell adjacent thereto, wherein

the inner lead and the bus bar electrode are electrically connected to each other with a solder, and

the solder contains Sn, and satisfies the following equation:

$\Sigma(ViWi)<2.8(\%)$

(where i denotes the number of elements composing the solder, Vi denotes the contraction coefficient (%) at the time of solidification of each of the elements composing the solder, Wi denotes the percentage by weight of each of the elements composing the solder (the whole is taken as 1), and the sum Σ takes 1 to i)

20. The solder cell module according to claim 19, wherein the solder contains Bi.

21. The solder cell module according to claim 20, wherein the solder contains 3 to 85 % by weight of Bi.

22. The solar cell module according to any one of claims 19 to 21, wherein the bus bar electrode is mainly composed of Ag, and the solder contains 0.5 to 6.5 % by weight of Ag.

23. A solar cell module comprising:

a plurality of solar cells in a flat plate shape;

an inner lead for electrically connecting a bus bar electrode provided on a light receiving surface of one of the solar cells and a bus bar electrode provided on a non-light receiving surface of the other solar cell adjacent thereto;

an outer lead connected to ends of the plurality of solar cells which are connected to one another by the inner lead; and

a coupling wiring for connecting the outer leads,

the outer lead and the coupling wiring being electrically connected to each other with a solder mainly composed of tin, silver, and copper, and

the bus bar electrode and the inner lead being electrically connected to each other with a solder mainly composed of tin, bismuth, and silver.

24. The solar cell module according to claim 23, wherein the bus bar electrode and the outer lead are electrically connected to each other with a solder mainly composed of tin, bismuth, and silver.

25. The solar cell module according to claim 23 or 24, wherein the composition of the solder mainly composed of tin, silver, and copper is 1.0 to 5.0 % by weight of silver, 0.4 to 7.0 % by weight of copper, and the remaining percent by weight of tin.

26. The solar cell module according to any one of claims 23 to 25, wherein the composition of the solder mainly composed of tin, bismuth, and

silver is 20 to 60 % by weight of bismuth, 0.5 to 5 % by weight of silver, and the remaining percent by weight of tin.